

# Measuring Solutions for Your Application

## Thermocouple Meters

Instruments amplify, linearize, and display the millivolt signal generated by the two dissimilar wires of the thermocouple probe. The signal is proportional to the temperature gradient between the measuring and reference junctions. Oakton offers many low-cost, fast-response probes in a wide variety of designs. Handheld probes are ideal for inspection and maintenance. Many types of probes can be permanently installed. Probes resist mechanical shock. Use probe within 2000 feet of the instrument.

## Platinum RTD Meters

These instruments provide excellent accuracy, stability, and repeatability over a wide temperature range. Probes have an element with a characteristic resistance that increases as the temperature increases. Three-wire probe reduces effect of lead-length resistance on measurements, giving a more precise indication of temperature.

## Infrared Thermometers

Provide fast response for surface temperatures. Models are available for both close- and far-range measurements.

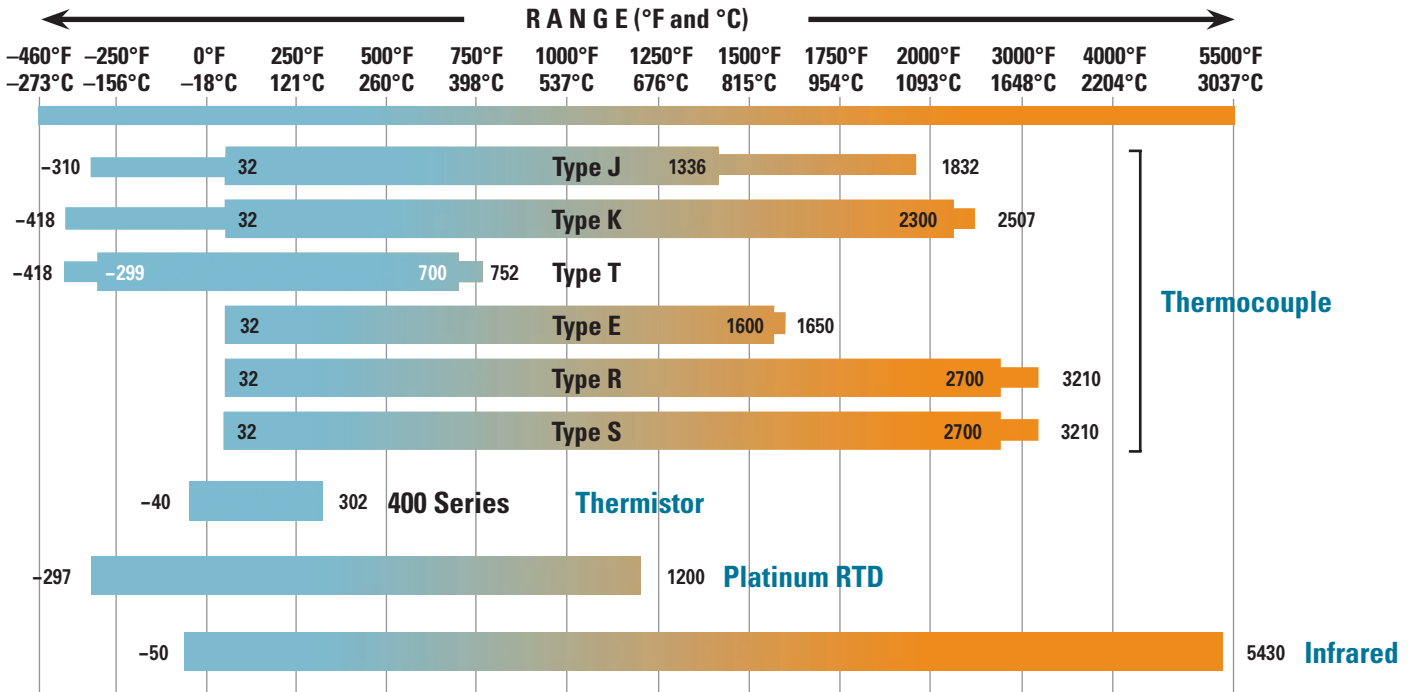
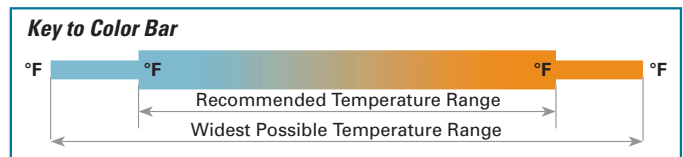


## Thermistor Meters

Thermistors exhibit a greater sensitivity and accuracy in the biological range—32 to 212°F (0 to 100°C). Probes encase a ceramic element that generally decreases in resistance as the temperature increases.

## Temperature Instrument Range Guide

The stated accuracy of any temperature measurement device is for the "Recommended Temperature Range" only. The narrow section of the temperature bar represents the widest range the instrument can be used in. Accuracy in this range is not guaranteed. Probe damage may occur at the extreme ends of the temperature range. Temperatures listed below are approximate.



## Typical Accuracies

### Thermocouple

Type J, K, and E probes: ±1.8 to 7.9°F or ±0.4% of reading above 32°F, whichever is greater  
Type T probes: ±0.9 to 3.6°F or ±0.4% of reading above 32°F, whichever is greater  
Type R and S probes: ±2.5°F or ±0.25% of reading, whichever is greater  
Meters: ±0.1 to 1% of reading and ±1.8°F (±1°C)

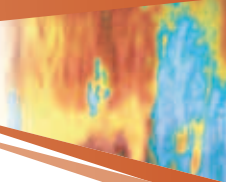
### Thermistor

400-series probes: ±0.36°F (±0.2°C) from 32 to 167°F (0 to 75°C)  
500-series probes: ±0.2°F (±0.1°C)  
700-series probes: ±0.27°F (±0.15°C)  
Meters: ±0.2 to 0.4°F (±0.1 to 0.2°C)

### Platinum RTD

Probes: ±0.2 to 0.35% of reading  
Meters: ±0.1% of reading and ±1°F (±1°C)  
Infrared: ±1 to 3% of reading

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# Acorn® Basic K Thermocouple Thermometer

Our simplest thermocouple thermometer



93000-00

### Standard Type K miniconnector

▼ Type K probes provide widest temperature range

### All push-button operation

▼ For fast, easy use

### Compact size

▼ Fits right in your pocket—take your Oakton Temp meter anywhere!

### °C/°F selectable

### Minimum and maximum temperature display

▼ Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

### Temperature offset calibration adjustment

▼ Push-button adjustment for fine-tuning factory calibration

### Hold function

▼ Freezes measurements for convenient reading and recording

### Auto-off function

▼ Turns off meter after 17 minutes of nonuse to save batteries

### Optional rubber armor

▼ Protects meter; features a built-in stand



Miniconnector on side of meter for fast probe connections



Optional rubber armor features built-in stand

## Applications

**General:** Ideal for any application that requires measuring/monitoring the temperature of any liquid, solid, semisolid, or gel.

**Industrial:** Use in photo developing, chemical, and plating industries.

## Specifications

**Range:** -418 to 2501°F (-250 to 1372°C)

**Accuracy:** ±0.25% of reading plus 0.9°F (0.5°C) above -99.9°F/C, ±0.25% of reading plus 2°F (1°C) below -99.9°F/C

**Resolution:** 0.1°F/C from -99.9 to 299.9°F/C; 1°F/C outside this range

**Display:** 4-digit LCD with 5/8" (14 mm) high numerals

**Display update rate:** every 0.5 second

**Power:** four AAA batteries (included)

**Probe:** one type K thermocouple probe with miniconnector (not included)

**Dimensions:** 5.7" x 2.7" x 1.3" (14.5 x 7 x 3.5 cm)

**Weight:** 0.9 lb (0.4 kg)

## Ordering Information

ISO9001:2000  
CERTIFIED SUPPLIER

CE 3 year warranty

| Catalog number | Description        | Included                               |
|----------------|--------------------|--|
| WD-93000-00    | Acorn Temp Basic K | Meter, rubber armor, and batteries     |
| WD-35627-80    | Rubber armor       | Rubber armor with built-in meter stand |

Select a probe to match your application

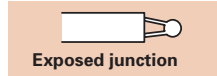
See pages 8–13 to see our wide selection of probes.

# Thermocouple Selection Guide

## Thermocouple Probe Junction Types

Sheaths with small diameters have faster response times; sheaths with larger diameters have longer life and are better for measuring higher temperatures.

**Exposed Junction** has the fastest response time—ideal for measuring rapid temperature changes. Clear coating on most models provides a humidity barrier for the thermocouple. Do not use with corrosive fluids or atmospheres.



**Ungrounded Junction** has a welded junction insulated from the protective sheath and is electrically isolated. Longer response time; use for conductive solutions or where isolation of the measuring circuitry is required.



**Grounded Junction** has a junction welded to tip of sheath. Wires are completely sealed from contaminants. Good response time.



## Probe Sheath/Body Materials

**Inconel® 600 Sheath** is ideal for severely corrosive environments and elevated temperatures. Resists progressive oxidation. Maximum operating temperature: 2100°F (1148°C) continuous; 2500°F (1371°C) intermittent.

**304 SS Sheath** is for general-purpose use, is corrosion-resistant, and good for food service and biological applications. Maximum operating temperature: 1650°F (898°C) continuous; 2550°F (1398°C) intermittent.

**316 SS Sheath** has higher corrosion resistance than 304 SS. Withstands some strong acids. Maximum operating temperature: 1650°F (898°C) continuous; 2500°F (1371°C) intermittent.

**SS Sheath with Coating of PTFE or PFA** with grounded junction is ideal with corrosive liquids and atmospheres. Longer response time. Temperatures to 500°F (260°C).

**Polymer Body Probes** are available in a variety of polymers including Kapton® and PTFE. These provide excellent flexibility and often good chemical resistance. Be sure to consult a chemical compatibility table when selecting a probe for your application.

## Physical Characteristics of Thermocouples



Type J Thermocouple

**Wire insulation color:**

- + = White
- = Red

**Wire material:**

- + = Iron
- = Constantan

**Properties:**

- + = Strongly magnetic

**Atmosphere for exposed junction:**

Reducing



Type K Thermocouple

**Wire insulation color:**

- + = Yellow
- = Red

**Wire material:**

- + = Chromel
- = Alumel

**Properties:**

- + = Moderately magnetic

**Atmosphere for exposed junction:**

Clean oxidizing



Type T Thermocouple

**Wire insulation color:**

- + = Blue
- = Red

**Wire material:**

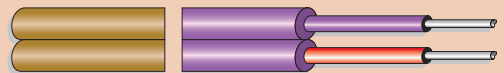
- + = Copper
- = Constantan

**Properties:**

- + = Copper color

**Atmosphere for exposed junction:**

Mildly oxidizing and reducing or with moisture



Type E Thermocouple

**Wire insulation color:**

- + = Purple
- = Red

**Wire material:**

- + = Chromel
- = Constantan

**Properties:**

- + = Greater stiffness

**Atmosphere for exposed junction:**

Vacuum, inert mildly oxidizing or reducing

## General Considerations

**Extend Your Thermocouples** up to 2000 feet without signal loss. Extension wire must be the same type as the thermocouple.

**System Error** becomes important when you select a probe and meter to make a complete temperature measurement system. For example: a meter has an accuracy of  $\pm 0.7^\circ\text{F}$ ; probe error for the type T probe with metal sheath, straight cable, and stripped ends will have an error limit of  $\pm 1.8^\circ\text{F}$  at  $400^\circ\text{F}$ . Therefore, the probe-meter system accuracy will be  $(\pm 0.7) + (\pm 1.8) = \pm 2.5^\circ\text{F}$  at  $400^\circ\text{F}$ .

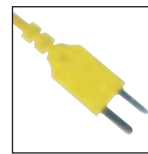
**NIST Traceability** is required for many applications. In order to make an item traceable to NIST standards, the item and the standard are exposed to the same conditions, the readings are noted, and the difference between the readings is recorded on a NIST certificate. When taking future readings with the item, the value on the certificate must be added or subtracted from the measured value.

# General-Purpose Probes

## Stainless steel sheaths provide good chemical resistance and fast thermal response

These thermocouple probes were designed to measure any general-purpose or liquid immersion application. All thermocouple probes include a 5-ft PVC coiled cord with strain relief that protects from repeated flexing and tugging. Ergonomic, easy-grip 5"L glass-filled nylon handle (unless noted below) provides maximum heat insulation and impact resistance. Fingerstops on handle prevent probe from rolling and fingers from sliding when inserting probe into hard materials.

The 316 stainless steel sheath (shaft casing) provides durability, strength, and maximum abrasion resistance. Rugged thermoset plastic miniconnector is compatible with all Oakton and Acorn® thermocouple thermometers. Connectors and coiled cord are color-coded based on type: type J black, type K yellow, and type T blue.



Miniconnector



Standard nylon handle



General-purpose probe  
08516-55

### Specifications & Ordering Information

| Catalog number                        | Type | Temperature range              | Features   | Tip length | Dimensions* |
|---------------------------------------|------|--------------------------------|--|------------|-------------|
| <b>Standard probes</b>                |      |                                |  |            |             |
| WD-08517-55                           | J    | -310 to 1400°F (-190 to 760°C) | Junction: grounded<br>Response time: 15 sec (liquids)<br>316 SS sheath; nylon handle     | 5"         |             |
| WD-08516-55                           | K    | -418 to 1650°F (-250 to 899°C) |  |            |             |
| WD-08500-05                           | T    | -418 to 752°F (-250 to 400°C)  |  |            |             |
| WD-93756-03                           | J    | -310 to 1400°F (-190 to 760°C) |  |            |             |
| WD-93756-23                           | K    | -418 to 1650°F (-250 to 899°C) |  |            |             |
| WD-93756-63                           | T    | -418 to 752°F (-250 to 400°C)  |  |            |             |
| WD-93756-04                           | J    | -310 to 1400°F (-190 to 760°C) | Junction: grounded<br>Response time: 30 sec (liquids)<br>304 SS sheath; PVC short handle | 4.5"       |             |
| WD-08439-60                           | K    | -418 to 1650°F (-250 to 899°C) |  |            |             |
| WD-08439-64                           | T    | -418 to 752°F (-250 to 400°C)  |  |            |             |
| <b>Small-diameter standard probes</b> |      |                                |  |            |             |
| WD-08505-55                           | J    | -310 to 1300°F (-190 to 704°C) | Junction: grounded<br>Response time: 10 sec<br>316 SS sheath; nylon handle               | 4"         |             |
| WD-08505-56                           | K    | -418 to 1500°F (-250 to 816°C) |  |            |             |
| WD-08505-57                           | T    | -418 to 650°F (-250 to 343°C)  |  |            |             |
| <b>All stainless steel probes</b>     |      |                                |  |            |             |
| WD-93600-02                           | J    | -310 to 1400°F (-190 to 760°C) | Junction: grounded<br>Response time: 30 sec<br>316 SS sheath; 316 SS handle              | 8"         |             |
| WD-93600-22                           | K    | -418 to 1650°F (-250 to 899°C) |  |            |             |
| WD-93600-42                           | T    | -418 to 752°F (-250 to 400°C)  |  |            |             |

\*Overall probe sheath lengths may vary up to ±0.25".



### Ensure the accuracy of your thermocouple probe, meter, or system!

Calibration to a NIST-traceable standard helps you meet ISO, FDA, USDA, and EPA guidelines. Our A2LA-accredited metrology laboratory will pretest and calibrate your thermocouple equipment. Service includes NIST-traceable calibration certificate with before and after test data at four temperature test points. See pages 30-31 for ordering information.

# Penetration and Air/Gas Probes

**Spear tips make semisolid testing easy; exposed junctions with perforated shields provide fast response to flowing air**

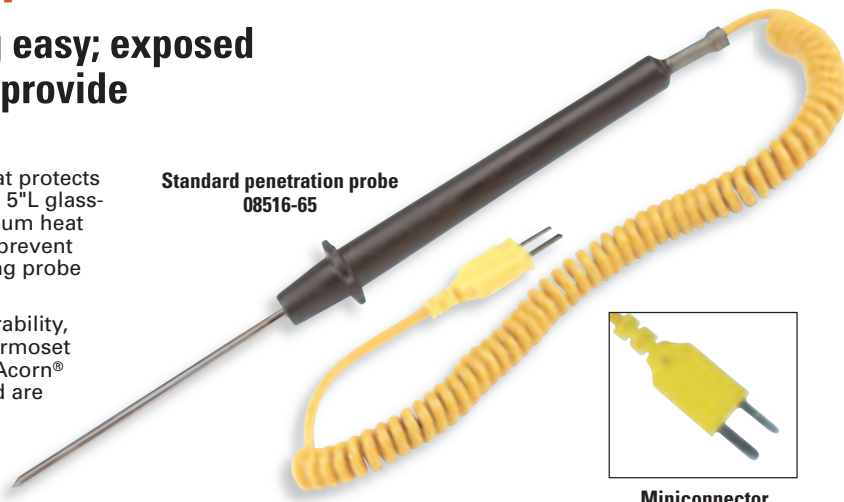
Probes include a 5-ft PVC coiled cord with strain relief that protects from repeated flexing and tugging. Ergonomic, easy-grip 5" L glass-filled nylon handle (unless noted below) provides maximum heat insulation and impact resistance. Fingerstops on handle prevent probe from rolling and fingers from sliding when inserting probe into hard materials.

The 316 stainless steel sheath (shaft casing) provides durability, strength, and maximum abrasion resistance. Rugged thermoset plastic miniconnector is compatible with all Oakton and Acorn® thermocouple thermometers. Connectors and coiled cord are color-coded based on thermocouple type: type J black, type K yellow, and type T blue.

**A Penetration Probes** offer a pointed tip style for penetration into hard and semisolid materials. Sturdy stainless steel tip casing prevents tip from bending when inserting.

**B Air/Gas Probes** are designed with a perforated shield which allows air and other gases to flow into the sensor for quick readings. Metal shield also absorbs radiated heat and minimizes sensor error. Our sensors are encased in ceramic mineral (MGO) insulation to provide stability, and shock and vibration resistance.

Standard penetration probe  
08516-65



Miniconnector



Standard nylon handle

## Specifications & Ordering Information

| Catalog number                                   | Type | Temperature range              | Features                              | Tip length | Dimensions |
|--|------|--------------------------------|---------------------------------------|------------|------------|
| <b>A Penetration probes</b>                      |      |                                |                                       |            |            |
| <b>Standard probes</b>                           |      |                                |                                       |            |            |
| WD-08517-65                                      | J    | -310 to 1400°F (-190 to 760°C) | Junction: grounded                    | 5"         |            |
| WD-08516-65                                      | K    | -418 to 1650°F (-250 to 899°C) | Response time: 25 sec (liquids)       |            |            |
| WD-08500-65                                      | T    | -418 to 752°F (-250 to 400°C)  | 304 SS sheath; nylon handle           |            |            |
| WD-93601-22                                      | J    | -310 to 1400°F (-190 to 760°C) | Junction: grounded                    | 12"        |            |
| WD-93601-24                                      | K    | -418 to 1652°F (-250 to 900°C) | Response time: 50 sec                 |            |            |
| WD-93601-26                                      | T    | -418 to 700°F (-250 to 371°C)  | 316 SS sheath; nylon handle           |            |            |
| WD-93601-42                                      | J    | -310 to 1400°F (-190 to 760°C) | Junction: grounded                    | 24"        |            |
| WD-93601-44                                      | K    | -418 to 1652°F (-250 to 900°C) | Response time: 50 sec                 |            |            |
| WD-93601-46                                      | T    | -418 to 550°F (-250 to 287°C)  | 316 SS sheath; nylon handle           |            |            |
| <b>Small-diameter probes with hypodermic tip</b> |      |                                |                                       |            |            |
| WD-93601-02                                      | J    | -310 to 1300°F (-190 to 704°C) | Junction: grounded                    | 4"         |            |
| WD-93601-04                                      | K    | -418 to 1500°F (-250 to 816°C) | Response time: 15 sec                 |            |            |
| WD-93601-06                                      | T    | -418 to 650°F (-250 to 343°C)  | 316 SS sheath; nylon handle           |            |            |
| <b>Low-cost probes</b>                           |      |                                |                                       |            |            |
| WD-08439-80                                      | J    | -310 to 1400°F (-190 to 760°C) | Junction: grounded                    | 4.5"       |            |
| WD-08439-82                                      | K    | -418 to 1650°F (-250 to 899°C) | Response time: 25 sec (liquids)       |            |            |
| WD-08439-84                                      | T    | -418 to 752°F (-250 to 400°C)  | 316 SS sheath; PVC short handle       |            |            |
| <b>B Air/gas probes</b>                          |      |                                |                                       |            |            |
| <b>Standard probes</b>                           |      |                                |                                       |            |            |
| WD-08517-75                                      | J    | -310 to 1000°F (-190 to 537°C) | Junction: exposed; isolated           | 8.5"       |            |
| WD-08516-75                                      | K    | -418 to 1000°F (-250 to 537°C) | Response time: 225 s at 5 m/s airflow |            |            |
| WD-08500-75                                      | T    | -418 to 1000°F (-250 to 537°C) | 316 SS sheath and radiation shield    |            |            |
| <b>Low-cost probes</b>                           |      |                                |                                       |            |            |
| WD-08439-90                                      | J    | -310 to 572°F (-190 to 300°C)  | Junction: exposed; isolated           | 5"         |            |
| WD-08439-92                                      | K    | -418 to 572°F (-250 to 300°C)  | Response time: 225 s at 5 m/s airflow |            |            |
| WD-08439-94                                      | T    | -418 to 572°F (-250 to 300°C)  | 304 SS sheath and SS wire coil        |            |            |

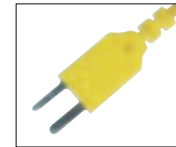
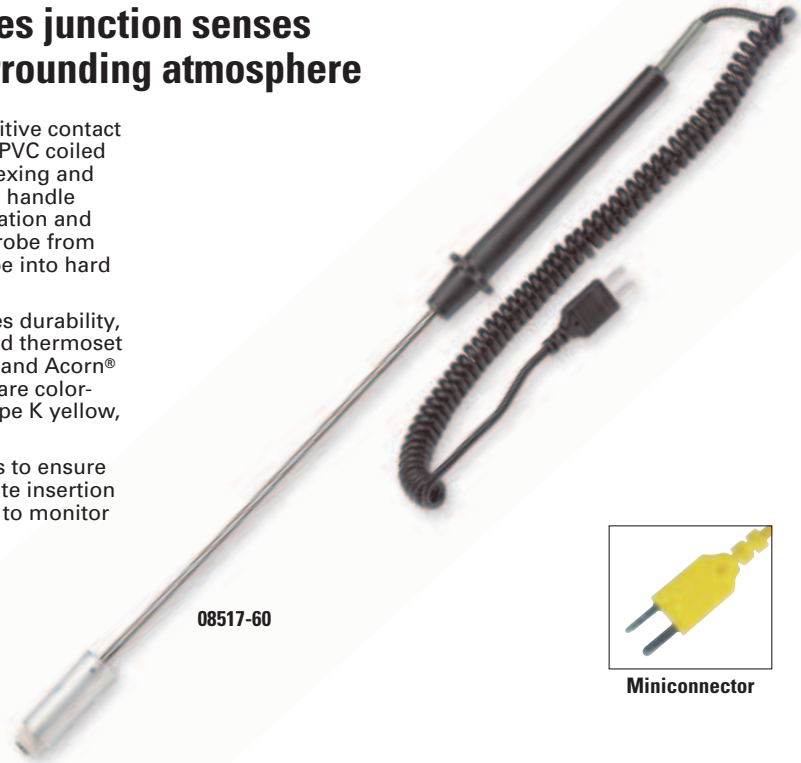
# Surface Probes

## Surface ground junction ensures junction senses temperature of surface, not surrounding atmosphere

Surface probes offer dual spring tips to provide positive contact with flat or slightly irregular surfaces. Include a 5-ft PVC coiled cord with strain relief that protects from repeated flexing and tugging. Ergonomic, easy-grip 5"L glass-filled nylon handle (unless noted below) provides maximum heat insulation and impact resistance. Fingerstops on handle prevent probe from rolling and fingers from sliding when inserting probe into hard materials.

The 316 stainless steel sheath (shaft casing) provides durability, strength, and maximum abrasion resistance. Rugged thermoset plastic miniconnector is compatible with all Oakton and Acorn® thermocouple thermometers. Connectors and cord are color-coded based on thermocouple type: type J black, type K yellow, and type T blue.

**A,B,C** Standard surface probes feature ceramic tips to ensure excellent thermal contact. **D** Flat-leaf probes facilitate insertion into the openings. **E** Adhesive probes make it easy to monitor surface temperatures over time.



Miniconnector

### Specifications & Ordering Information

| Catalog number   | Type | Temperature range              | Features                       | Tip length | Dimensions |
|--|------|--------------------------------|--------------------------------|------------|------------|
| <b>A</b> Standard straight probes  |      |                                |                                |            |            |
| WD-08517-60  | J    | -310 to 1200°F (-190 to 649°C) | Junction: exposed; isolated    | 10"        |            |
| WD-08516-60  | K    | -418 to 1200°F (-250 to 649°C) | Response time: 30 sec          |            |            |
| WD-08500-60  | T    | -418 to 650°F (-250 to 343°C)  | Aluminum housing; nylon handle |            |            |
| <b>B</b> Low-cost probes   |      |                                |                                |            |            |
| WD-08439-70  | J    | -310 to 1200°F (-190 to 649°C) | Junction: exposed; isolated    | 4.5"       |            |
| WD-08439-72  | K    | -418 to 1200°F (-250 to 649°C) | Response time: 30 sec          |            |            |
| WD-08439-74  | T    | -418 to 700°F (-250 to 371°C)  | Aluminum housing; no handle    |            |            |
| <b>C</b> 90°-angle probes: ideal for hard-to-reach areas.  |      |                                |                                |            |            |
| WD-08517-64  | J    | -310 to 1200°F (-190 to 649°C) | Junction: exposed; isolated    | 2"         |            |
| WD-08516-64  | K    | -418 to 1200°F (-250 to 649°C) | Response time: 30 sec          |            |            |
| WD-08500-64  | T    | -418 to 650°F (-250 to 343°C)  | Aluminum housing; nylon handle |            |            |
| <b>D</b> Flat-leaf probes: flexible for positive contact in hard-to-reach areas; use between metal plates or on other surfaces.                        |      |                                |                                |            |            |
| WD-08518-50  | J    | -310 to 1400°F (-190 to 760°C) | Junction: grounded             | 4.5"       |            |
| WD-08518-60  | K    | -418 to 1650°F (-250 to 900°C) | Response time: 5 sec           |            |            |
| WD-08518-70  | T    | -418 to 752°F (-250 to 400°C)  | Nylon handle                   |            |            |
| <b>E</b> Self-adhesive probes: adhere to most surfaces, Kapton®-insulated wire and industrial adhesives for high temperature and long-term durability. |      |                                |                                |            |            |
| WD-08519-50  | J    | -310 to 760°F (-190 to 404°C)  | Junction: grounded             | —          |            |
| WD-08519-52  | K    | -418 to 760°F (-250 to 404°C)  | Response time: 5 sec           |            |            |
| WD-08519-54  | T    | -418 to 760°F (-250 to 404°C)  | No handle; 5-ft L wire         |            |            |

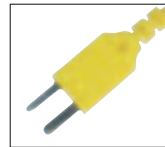
# Flexible Insulated-Wire Probes

Choose from a variety of coating materials to match your application

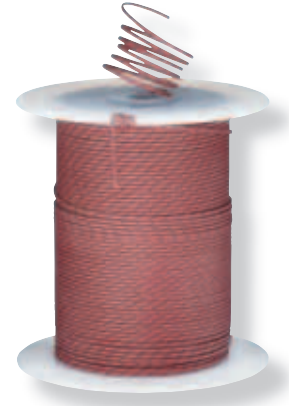
Flexible insulated-wire probes include a straight insulated cable without a handle. These probes can be easily bent and mounted on walls or around corners.

PVC-insulated probes provide economical options with good flexibility. The PTFE- and FEP-insulated probes are for use with acids and chemicals. Kapton®-insulated probes exhibit an excellent balance of physical, chemical, and electrical properties over a wide temperature range, particularly at unusually high temperatures. Fiberglass-insulated probes offer excellent electrical insulation properties and can be exposed to extremely high temperatures.

Rugged thermoset plastic miniconnector is compatible with all Oakton and Acorn® thermocouple thermometers. Connectors and cord are color-coded based on thermocouple type: type J black, type K yellow, and type T blue.



Miniconnector



## Specifications & Ordering Information

| Catalog number  | Type | Temperature range             | Features                                       | Tip length | Dimensions |
|---|------|-------------------------------|--|------------|------------|
| <b>PVC-insulated probes with epoxy-coated tip</b> , 20-gauge (0.032" dia) wire; 10-ft L; short-term immersible.           |      |                               |  |            |            |
| WD-08466-02   | J    | -310 to 221°F (-190 to 105°C) | Junction: ungrounded                           | —          |            |
| WD-08466-04   | K    | -418 to 221°F (-250 to 105°C) | Response time: 25 sec                          | —          |            |
| WD-08466-06   | T    | -418 to 221°F (-250 to 105°C) |  | —          |            |
| <b>Fine-gauge PTFE-insulated probe</b> , 0.025" outer dia; 3-ft L; implant in semisolids. Includes five 18-gauge needles. |      |                               |  |            |            |
| WD-08506-75   | T    | -418 to 302°F (-250 to 150°C) | Junction: ungrounded<br>Response time: 0.5 sec | —          |            |
| <b>FEP-insulated probes with epoxy-coated junction</b> , 24-gauge (0.020" dia) wire; 10-ft L; long-term immersible.       |      |                               |  |            |            |
| WD-08466-81   | J    | -310 to 400°F (-190 to 204°C) | Junction: ungrounded                           | —          |            |
| WD-08466-82   | K    | -418 to 400°F (-250 to 204°C) | Response time: 15 sec                          | —          |            |
| WD-08466-83   | T    | -418 to 400°F (-250 to 204°C) |  | —          |            |
| <b>Kapton-insulated probe</b> , 24-gauge (0.020" dia) wire; 10-ft L; ideal for multipoint temperature measurements.       |      |                               |  |            |            |
| WD-08517-90   | J    | -310 to 600°F (-190 to 315°C) | Junction: exposed<br>Response time: 15 sec     | —          |            |
| <b>Kapton-insulated probes</b> , 30-gauge (0.010" dia) wire; 5-ft L; ideal for checking food temperatures. Pack of six.   |      |                               |  |            |            |
| WD-08505-87   | J    | -310 to 759°F (-190 to 404°C) | Junction: exposed                              | —          |            |
| WD-08505-86   | K    | -418 to 759°F (-250 to 404°C) | Response time: 0.5 sec                         | —          |            |
| WD-08505-85   | T    | -418 to 759°F (-250 to 404°C) |  | —          |            |
| <b>Fiberglass-insulated probes</b> , 24-gauge (0.020" dia) wire; 10-ft L. Use for high-temperature measurements.          |      |                               |  |            |            |
| WD-08512-81   | J    | -310 to 900°F (-190 to 482°C) | Junction: exposed                              | —          |            |
| WD-08512-82   | K    | -418 to 900°F (-250 to 482°C) | Response time: 15 sec                          | —          |            |
| WD-08512-83   | T    | -418 to 750°F (-250 to 400°C) |  | —          |            |

## Thermocouple Wires

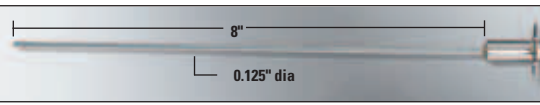
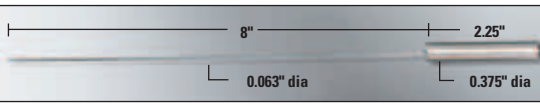
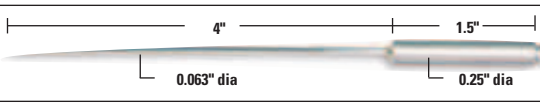
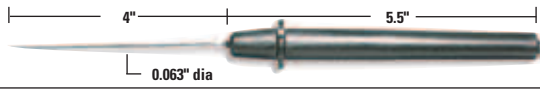
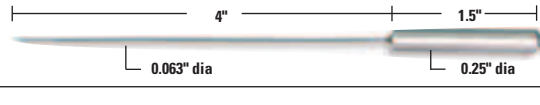

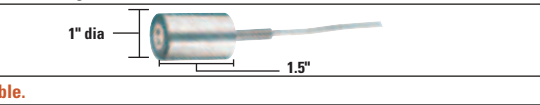
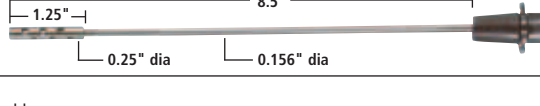
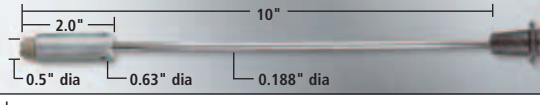
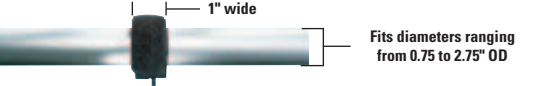
Wires come in 24- or 20-gauge for fabricating your own probes or extension cables (meets ANSI and ASTM standards). PVC/PVC wire is extension-grade wire.



| Type | Insulation | 24-gauge wire  | 20-gauge wire  |
|------|------------|----------------|----------------|
|      |            | Catalog number | Catalog number |
| J    | PVC        | WD-08541-06    | WD-08541-16    |
| K    |            | WD-08541-09    | WD-08541-20    |
| T    |            | WD-08541-12    | WD-08541-25    |

# Specialty Probes

Designed for food, science, electronics, and HVAC applications

| Catalog number   | Type        | Temperature range  | Features   | Dimensions*  |
|--|-------------|--|--|--|
| <b>Food probes</b> —easy clean-up designs. For more food probes, see the stainless steel probes on page 9  |             |  |  |  |
| <b>All stainless steel probes, 8"L</b> ; for added durability—ideal for food processing applications. Include 4.5"L stainless steel handle and 4-ft SS-armored cable.  |             |  |  |  |
| WD-93600-02<br>WD-93600-22<br>WD-93600-42  | J<br>K<br>T | -310 to 1400°F (-190 to 760°C)<br>-418 to 1650°F (-250 to 899°C)<br>-418 to 752°F (-250 to 400°C)  | Junction: grounded<br>Response time: 30 sec<br>316 SS sheath; miniconnector; SS handle   |    |
| <b>Small-diameter probes with miniature stainless steel handles, 8"L</b> . Ideal for checking food temperatures. Include 5-ft coiled cable.  |             |  |  |  |
| WD-08505-61<br>WD-08505-62<br>WD-08505-63  | J<br>K<br>T | -310 to 1300°F (-190 to 704°C)<br>-418 to 1500°F (-250 to 816°C)<br>-418 to 650°F (-250 to 343°C)  | Junction: grounded<br>Response time: 10 sec<br>316 SS sheath; miniconnector; SS handle   |    |
| <b>Food-service probes with hypodermic tip, 4"L</b> . Include 4-ft straight armored cable.   |             |  |  |  |
| WD-93607-20<br>WD-93607-22<br>WD-93607-24  | J<br>K<br>T | -310 to 700°F (-190 to 371°C)<br>-418 to 700°F (-250 to 371°C)<br>-418 to 700°F (-250 to 371°C)    | Junction: grounded<br>Response time: 10 sec<br>316 SS sheath and handle; miniconnector   |    |
| <b>Science needle tip probes</b>   |             |  |  |  |
| <b>Small-diameter probes with hypodermic tip, 4"L</b> . Include 5-ft coiled cable.   |             |  |  |  |
| WD-93601-02<br>WD-93601-04<br>WD-93601-06  | J<br>K<br>T | -310 to 1300°F (-190 to 704°C)<br>-418 to 1500°F (-250 to 816°C)<br>-418 to 650°F (-250 to 343°C)  | Junction: grounded<br>Response time: 15 sec<br>316 SS sheath; miniconnector;<br>glass-filled polypropylene handle                          |   |
| <b>Hypodermic probes, 4"L</b> . Include 4-ft straight PVC cable and bendable sheath.   |             |  |  |  |
| WD-08116-65<br>WD-08117-65<br>WD-08113-65  | J<br>K<br>T | -310 to 700°F (-190 to 371°C)<br>-418 to 700°F (-250 to 371°C)<br>-418 to 700°F (-250 to 371°C)    | Junction: grounded<br>Response time: 10 sec<br>316 SS sheath and handle; miniconnector   |  |
| <b>Electronics small surface probes</b> —fast response and minimal damages to components.  |             |  |  |  |
| <b>Small-diameter probes, 8"L</b> . Small diameter is ideal for confined areas. Exposed junction is isolated from 316 SS shaft and aluminum housing with ceramic support. Include 5-ft coiled cable.                             |             |  |  |  |
| WD-08517-62<br>WD-08516-62<br>WD-08500-62  | J<br>K<br>T | -310 to 1200°F (-190 to 649°C)<br>-418 to 1200°F (-250 to 649°C)<br>-418 to 650°F (-250 to 343°C)  | Junction: exposed; isolated<br>Response time: 15 sec<br>316 SS shaft and aluminum housing;<br>miniconnector; nylon handle                  |  |
| <b>HVAC probes</b>   |             |  |  |  |
| <b>Dropping/magnetic probes, 1.5"L</b> . Attach magnetic probe to any flat ferrous surface. Include 10-ft straight SS braid over fiberglass-insulated wire.  |             |  |  |  |
| WD-08519-86<br>WD-08514-86<br>WD-08525-86  | J<br>K<br>T | -310 to 1200°F (-190 to 649°C)<br>-418 to 1200°F (-250 to 649°C)<br>-418 to 750°F (-250 to 399°C)  | Junction: exposed<br>Response time: 30 sec<br>Aluminum housing; miniconnector  |  |
| <b>General-purpose air/gas probes; 8.5"L</b> ; for general-purpose air temperature measurement. Includes 5-ft coiled cable.  |             |  |  |  |
| WD-08517-75<br>WD-08516-75<br>WD-08500-75  | J<br>K<br>T | -310 to 1000°F (-190 to 537°C)<br>-418 to 1000°F (-250 to 537°C)<br>-418 to 1000°F (-250 to 537°C) | Junction: exposed; isolated<br>Response time: 225 s at 5 m/s airflow<br>316 SS sheath and radiation shield;<br>miniconnector; nylon handle |  |
| <b>Standard straight probes, 10"L</b> . Use to monitor such surfaces as hot plates, furnaces, and molds. Exposed junction is isolated from 316 SS shaft and aluminum housing with ceramic support. Includes a 5-ft coiled cable. |             |  |  |  |
| WD-08517-60<br>WD-08516-60<br>WD-08500-60  | J<br>K<br>T | -310 to 1200°F (-190 to 649°C)<br>-418 to 1200°F (-250 to 649°C)<br>-418 to 650°F (-250 to 343°C)  | Junction: exposed; isolated<br>Response time: 30 sec<br>316 SS shaft; aluminum housing;<br>miniconnector; nylon handle                     |  |
| <b>Velcro® strap-on probes, 8"L</b> . Temporarily or permanently strap onto tubing or pipes—probes are easy to install and remove. Strap is 8" long and fits diameters from 0.75 to 2.75" OD. Include 10-ft straight PVC cable.  |             |  |  |  |
| WD-08469-80<br>WD-08469-82<br>WD-08469-84  | J<br>K<br>T | -310 to 212°F (-190 to 100°C)<br>-418 to 212°F (-250 to 100°C)<br>-418 to 212°F (-250 to 100°C)    | Junction: ungrounded<br>Response time: 300 sec<br>Miniconnector  |  |

\*Overall probe sheath lengths may vary up to ±0.25".